Amendments to the Claims:

Listing of the Claims:

1.-47. (cancelled).

48. (new) A method for maintaining an aircraft engine, comprising:

inputting a modification scope of at least one maintenance operation for at least one part of an aircraft engine;

generating an expected bill of material comprising said at least one part for said aircraft engine;

tearing down said aircraft engine;

populating an as-received configuration database with at least one part for said aircraft engine;

finding an unexpected part in said aircraft engine;

determining whether to reconfigure said modification scope of said at least one maintenance operation for said aircraft engine based upon finding said unexpected part;

dispositioning said unexpected part;

modifying said as-received configuration database for said aircraft engine based upon the disposition of said unexpected part;

generating for said unexpected part a tag comprising at least a part status;

routing said unexpected part based upon said part status;

generating a should-build database for said aircraft engine based upon the disposition of said unexpected part;

reassembling said aircraft engine; and

generating an as-shipped bill of material comprising said at least one part for a reassembled aircraft engine based upon at least the disposition of said unexpected part.

49. (new) The method of claim 48, wherein finding comprises finding a part not listed on said expected BOM for said aircraft engine.

50. (new) The method of claim 48, wherein dispositioning comprises the steps of:

determining whether said unexpected part is a planned part of said aircraft engine; and

determining said unexpected part is said planned part.

51. (new) The method of claim 50, further comprising generating for said unexpected part a new tag that indicates said unexpected part is said planned part.

52. (new) The method of claim 48, wherein dispositioning comprises the steps of:

determining whether said unexpected part is a planned part of said aircraft engine;

determining said unexpected part is not said planned part;

determining whether said unexpected part is reoperable to produce said planned part; and

reoperating said unexpected part to produce said planned part.

53. (new) The method of claim 52, further comprising generating for said planned part a new tag that indicates said planned part comprises a reoperated unexpected part.

54. (new) The method of claim 52, wherein reoperating comprises performing an internal repair, an external repair or both said internal repair and said external repair upon said unexpected part.

55. (new) The method of claim 48, wherein dispositioning comprises the steps of:

determining whether said unexpected part is a planned part of said aircraft engine;

determining said unexpected part is not said planned part;

determining said unexpected part is not reoperable to produce said planned part; and

removing said unexpected part from said as-received configuration database.

56. (new) The method of claim 55, further comprising generating for said unexpected part a new tag that indicates said unexpected part has been removed.

57. (new) The method of claim 48, wherein routing comprises the steps of:

generating at least one work instruction for said unexpected part;

determining at least one location where said at least one work instruction is performed; and

routing said unexpected part to said at least one location.

58. (new) The method of claim 57, further comprising generating for said unexpected part a new tag that indicates at least one routing instruction for said unexpected part.

59. (new) The method of claim 48, wherein dispositioning comprises the steps of:

determining whether said unexpected part is a planned part of said aircraft engine;

determining said unexpected part is not said planned part;

comparing said unexpected part with at least one replacement part of said aircraft engine;

matching said unexpected part with said at least one replacement part; and

replacing said unexpected part with said replacement part.

60. (new) The method of claim 59, further comprising generating for said replacement part a new tag that indicates said replacement part replaced said unexpected part.

61. (new) The method of claim 59, wherein comparing comprises comparing a first location identifier of said unexpected part to a second location identifier of said at least one replacement part using at least one service bulletin of said aircraft engine.

62. (new) A system for maintaining an aircraft engine, comprising:

means for inputting in a computer readable storage device a modification scope of at least one maintenance operation for at least one part of an aircraft engine;

means for generating in said computer readable storage device an expected bill of material comprising said at least one part for said aircraft engine;

means for populating in said computer readable storage device an as-received configuration database with at least one part for said aircraft engine;

means for determining whether to reconfigure said modification scope of said at least one maintenance operation for said aircraft engine based upon an unexpected part;

means for dispositioning in said computer readable storage device said unexpected part;

means for modifying in said computer readable storage device said as-received configuration database for said aircraft engine based upon the disposition of said unexpected part;

means for generating in said computer readable storage device a tag comprising at least a part status of said unexpected part;

means for routing said unexpected part based upon said part status;

means for generating in said computer readable storage device a should-build database for said aircraft engine based upon the disposition of said unexpected part; and

means for generating in said computer readable storage medium an as-shipped bill of material comprising said at least one part for a reassembled aircraft engine based upon at least the disposition of said unexpected part.

63. (new) The system of claim 62, wherein means for dispositioning comprises:

means for determining whether said unexpected part is a planned part of said aircraft engine; and

means for determining said unexpected part is said planned part.

64. (new) The system of claim 63, further comprising means for generating for said unexpected part a new tag that indicates said unexpected part is said planned part.

65. (new) The system of claim 62, wherein means for dispositioning comprises:

means for determining whether said unexpected part is a planned part of said engine;

means for determining said unexpected part is not said planned part;

means for determining whether said unexpected part is reoperable to produce said planned part; and

means for reoperating said unexpected part to produce said planned part.

66. (new) The system of claim 65, further comprising means for generating for said planned part a new tag that indicates said planned part comprises a reoperated unexpected part.

67. (new) The system of claim 62, wherein dispositioning comprises:

means for determining whether said unexpected part is a planned part of said engine;

means for determining said unexpected part is not said planned part;

means for determining said unexpected part is not reoperable to produce said planned part; and

means for removing said unexpected part from said as-received configuration database.

68. (new) The system of claim 67, further comprising means for generating for said unexpected part a new tag that indicates said unexpected part has been removed.

69. (new) The system of claim 48, wherein means for routing comprises:

means for generating at least one work instruction for said unexpected part;

means for determining at least one location where said at least one work instruction is performed; and

means for routing said unexpected part to said at least one location.

70. (new) The system of claim 69, further comprising means for generating for said unexpected part a new tag that indicates at least one routing instruction for said unexpected part.

71. (new) The system of claim 62, wherein means for dispositioning comprises:

means for determining whether said unexpected part is a planned part of said engine;

means for determining said unexpected part is not said planned part;

means for comparing said unexpected part with at least one replacement part of said engine;

means for matching said unexpected part with said at least one replacement part; and

means for replacing said unexpected part with said replacement part.

72. (new) The system of claim 71, further comprising means for generating for said replacement part a new tag that indicates said replacement part replaced said unexpected part.

73. (new) The system of claim 71, wherein means for comparing comprises means for comparing a first location identifier of said unexpected part to a second location identifier of said at least one replacement part using at least one service bulletin of said engine.